1	WEST's network will provide advanced digital features, such as ISDN, network
2	business services and advanced display services. In addition, Nortel stated that
3	"Nortel will keep US WEST's network ready for new services, such as Local Number
4	Portability and for Advanced Intelligent Network AIN features"

5 These prices are similar to one of BellSouth's contracts.

# Q. WHAT SWITCH PRICES HAS BELLSOUTH USED AND WHY ARE THEY INCORRECT?

A. BellSouth's average price per line for 5E switches is \$191.78 and \$226.40 for the DMS-100,<sup>27</sup> resulting in a melded price of \$204.00 per line. Switch vendor contracts often are expressed in terms of price per line, as in one of the BellSouth contracts, rather than a discount off the list price. This means that the telephone company must interpret these complicated contracts and develop equations to compute what the appropriate SCIS/MO discount input should be. The difference between the contract price of \*\*\* per line vs. the \$191.78 per line calculated by SCIS/MO makes it apparent that BellSouth either did not use the information from the most current contracts, or made mistakes in converting the price per line contract price to a discount factor for SCIS/MO.

testimony.

Calculated from BellSouth's SCIS/MO study outputs by taking total switching investment and dividing by total lines. These investments correspond to the EF&I investment shown in the first line of Mr. Raley's table. Additional investments for MDF, land and building and other expenses are added subsequently, similar to the remaining rows in Mr. Raley's chart.

A comparison of prices from other comparable LECs with BellSouth's proposed 1 2 prices demonstrates that BellSouth's prices are significantly overstated by all accounts. 3

Source	Price Per Line
NBI	~\$100
Pacific Bell	\$110
Sprint Inputs to BCPM	~\$120
Raley Testimony-Southwestern Bell	\$85/115/140
Nortel/US West	-\$68
BellSouth Lucent Contract	•••
BellSouth UNE Cost Study	\$204

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#### WHAT SCIS/MO DISCOUNTS DOES AT&T PROPOSE? 5 Ο.

As stated above, SCIS begins with vendor list prices in its investments tables and A. 7 requires the local telephone company to enter a discount in order to reflect actual prices paid by that company. Each vendor begins with different list price levels and 8 therefore the discounts that the vendors offer will be different to generate 10 approximately the same total switch prices.24

> Due to time limitations and resource constraints, we were not able to incorporate BellSouth's contract pricing in our restatement of the BellSouth's investments. I have used the Southwestern Bell switch prices (\$85-\$140) as the foundation for restating the switching investments. This is, in actuality, an extremely conservative view of

<sup>28</sup> It is interesting to note that vendors have been consistently raising their list prices over many years, but actual switching prices per line are declining. This phenomena has two causes capacities are increasing and vendor discounts have been increasing.

- BellSouth's switching prices, given what we now know about BellSouth's actual contracts.
- The methodology we used to derive the discount was to use the Raley switch prices as "targets," as repeated in the table below:

	1-15,000 lines	15-40,000 lines	40-80,000 lines
EF&I Inv. Per	\$140	\$115	\$85
Line			

In order to determine a more appropriate discount that BellSouth should enter into SCIS/MO (and BellSouth's SCIS/IN-like spreadsheets), the discount necessary for each switch technology to approximately equal Mr. Raley's proposed price per line was calculated using SCIS results. We first determined the average number of lines per switching system for DMS switches and 5ESS switches in Louisiana. We then mapped the switch sizes for BellSouth to the corresponding Raley switch sizes as shown below:

Technology	BS Lines per Switching System <sup>30</sup>	Raley Corresponding Switch Size Category	Raley Price per Line
5ESS	30,095	15-40,000	\$115
DMS	20,903	15-40,000	\$115

AT&T emphasizes that that the SCIS/MO output results reflect only the EF&I price paid to the vendor without any additional investments for main distributing frame (MDF), protector, land, building, local telephone company installation/engineering, or expenses. Therefore, the SCIS/MO outputs correspond directly with the first row labeled EF&I in Mr. Raley's table.

<sup>30</sup> Lines per switching system were calculated using the SCIS Input Statistics report by taking the total lines per technology and dividing by total host switches.

1	BellSouth accumulated all of the switches for a given technology into a "study" in
2	SCIS/MO. We used the same two studies with BellSouth's input data, but varied the
3	discount input. The program was run iteratively until we matched the Raley price per
4	line. The table below shows the discount inputs that were derived:

Technology	Material Discount	Installation Discount	Engineering Discount
5ESS .	75.30%	0	0
DMS-100	84.03%	0	0

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The 5E discounts would have been even higher if we had used the BellSouth contract data.31

#### WHAT IMPACT WOULD THIS DISCOUNT INPUT CHANGE HAVE ON 8 Q.

#### **OUTPUTS?**

I have rerun the port investment study using BellSouth's models with BellSouth's 10 A. data, but substituted the discounts shown above. These revised investments are 11 12 compared to BellSouth's original values on the next page:

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<sup>31</sup> We do not propose, however, that the DMS discounts should be lower to reflect the Nortel contract; instead, the DMS discounts should be calculated to make the DMS price per line comparable to the 5E price per line.

	BellSouth <sup>32</sup> 5E Inv.	Revised 5E Inv.	BellSouth DMS Inv.	Revised DMS Inv.
2-wire Port	\$45.84	\$35.03	\$32.24	\$21.22
2-wire PBX Port	\$45.84	\$35.03	\$32.24	\$21.22
4-wire Voice Grade	\$45.84	\$35.03	\$32.24	\$21.22
2-wire DID Port <sup>33</sup>	\$188.28	<b>\$</b> 173.15	\$94.86	\$87.58
4-wire DID PortH	\$4,518.72	\$4,164.96	\$2,276.73	\$2,101.90

- See Exhibit II for restatements of all of the BellSouth switching investments using the 2 corrected discounts and other corrections detailed in this Testimony. 3
- BELLSOUTH HAS NOT INCLUDED APPROPRIATE INTEGRATED 5.0
- DIGITAL CARRIER LOOP INVESTMENTS IN THE PORT ELEMENTS 5
- WHAT IS THE DIFFERENCE IN INVESTMENTS BETWEEN ANALOG Q.
- 7 LINES AND INTEGRATED DIGITAL LOOP CARRIER?
- BellSouth used only the Analog line investment as shown in the first column in the 8 table below. Had BellSouth used GR303 and melded it with the analog lines, the 9 results would have been significantly lower, as shown below:

	BellSouth Analog per Line <sup>35</sup>	SCIS/MO GR303 IDLC per Line	SCIS/MO Melded per Line <sup>34</sup>
5ESS	\$32.24	\$36.66	<b>\$</b> 35.03
DMS-100	\$53.91	\$2.23	\$21.22

<sup>32</sup> These investments, as well as the DMS investments, were taken from the Input Workpapers for Port Elements in BellSouth's Cost Study

<sup>33</sup> Trunk investments include only the investment for the trunk termination, and not the usage investments BellSouth also added.

<sup>34</sup> The 4-wire DID Port is simply the 2-wire DID port (DS0) times 24 channels.

<sup>35</sup> All investments are based on the SCIS runs with corrected discount.

<sup>36</sup> The melding percentage used was 63.26% IDLC as calculated by Hatfield for Louisiana

1	AT&T utilized SCIS/MO to estimate the GR303-IDLC investments. SCIS/MO
2	includes GR303 calculations, but requires inputs that BellSouth has not provided
3	because they did not include GR303 IDLC in their study. AT&T identified a 5ESS
4	office and a DMS office in Louisiana that has TR008 IDLC,37 according to
5	BellSouth's input to SCIS. AT&T used the existing BellSouth data for the numbers
6	of lines, the call rates and holding times, and estimated the other inputs SCIS/MO
7	required. <sup>38</sup>
8	Integrated Digital Loop Carrier(IDLC) requires fewer main distributing frame
9	terminations because traffic has been aggregated onto trunks. In addition, forward-
10	looking GR303 compliant IDLC typically has less port investment than standard
11	analog lines. Since BellSouth failed to include this forward-looking technology, it
12	has overstated port investments which results in CLECs paying for an analog line
13	termination port and MDF termination regardless of whether the line is actually an
14	analog line or IDLC line.39 This point is made in much more detail in the testimony of
15	AT&T/MCI witness Carter.
16	The Hatfield model, on the other hand, appropriately models port investments as a
17	melded average between analog and IDLC.

<sup>37</sup> TR008 is older-generation IDLC, and is not considered forward-looking. BellSouth entered inputs for this older IDLC, but did not use the outputs in any of the switching investments.

<sup>38</sup> The estimated inputs were number of IDLC remote terminals and number of DS1s for IDLC remote terminals.

<sup>39</sup> See Mr. Ellison's testimony for a discussion of the need for a blended port element and Mr. Carter's testimony for more detail on integrated digital loop carrier capabilities.

1	6.0	BELLSOUTH HAS INAPPROPRIATELY ASSIGNED ALL OF THE
2		GETTING STARTED INVESTMENTS TO TRAFFIC SENSITIVE
3		SWITCHING UNBUNDLED ELEMENTS
4	Q.	WHAT IS THE SCIS/MO GETTING STARTED INVESTMENT?
5	A.	SCIS computes a Getting Started Investment for each switch that includes the initial
6		investment for:
7		Central processor and related equipment;
8		Maintenance and test equipment;
9		Spare components;
10		Miscellaneous equipment; and
11		<ul> <li>Investment for underutilized equipment, termed "Breakage".</li> </ul>
12		
13	Q.	HOW ARE THESE GETTING STARTED INVESTMENTS RECOVERED?
14	A.	SCIS assigns these getting started investments to a traffic sensitive category when
15		SCIS/MO is run in "average" mode (which is the way BellSouth ran the model for its
16		cost studies) on the assumption that switch replacement occurs due to processor
17		exhaust.40 In the "marginal" mode of SCIS/MO, however, these investments are
18		classified as non-traffic sensitive shared investments, based on the following
19		SCIS/MO user inputs: Processor utilization at three time periods; (1) at initial
20		installation of the switch, (2) at year 5, and (3) at switch replacement. The utilization
21		levels projected at time of switch replacement, summarized below, demonstrate that

<sup>40</sup> The average mode of SCIS attempts to ensure full cost recovery by allocating spare capacity and all fixed costs.

## Louisiana

# Errata Reflecting Investments based on Contract Prices instead of Southwestern Bell Public Prices

### PROPRIETARY VERSION

Page, Line	Change
17.8-15	Delete Paragraphs
18, line 1	Delete Table
18. line 4	replace "Mr. Raley's proposed" with "Bellsouth's contract"
18, line 5	Delete footnote #29 - "AT&T emphasizes"
18, line 6	after "Louisiana" delete period and add "and calculated what the total switching investment would be at the contract
	price of \$64 per line.
18. 7-9	Delete sentence and table (including foomote #30)
18, 12-13	After "matched", replace the rest of the sentence with "the total switching investments calculated from the contract."
18.13	Delete table .
19,1-3	Delete rest of table, sentence after table starting "The 5E Discounts" and footnote #31.
19,12	Replace Revised 5E Inv. column values with: \$25.34; \$25.34; \$25.34; \$51.56; \$1237.44
20,1	
19,12	Replace Revised DMS Inv. column values with \$34.15; \$34.15; \$34.15; \$51.21; \$1229.04
20.1	
20,10	Replace table values with:
]	BS Analog per Line: \$25.34; \$34.15
	GR303 per Line: \$19.11; \$1.09
	Melded per Line: \$21.40; \$13.24
23, 16	Replace table values with:
	Line Inv/Line: \$21.40; \$13.24
}	GS Additive: \$18.65; \$21.66
<u> </u>	Port Inv.: \$40.05; \$34.90; \$38.23
30, 4-6	Delete sentence starting with "Due to obtaining"
30,6-8	Delete sentence starting "BellSouth should have used" Do not delete footnote #52. Add "As before, SCIS/MO was
ļ	run iteratively, varying the ISDN discount inputs until the results matched the contract prices." Move footenote #52
	here.

# NON-PROPRIETARY VERSION

Page, Line	Change
17, 11-14	Delete Paragraphs
18.1-4	Delete all sentences before table. Delete table.
18, line 4	Delete Table
18. line 8	replace "Mr. Raley's proposed" with "Bellsouth's contract"
18. line 9	Delete footnote #29 - "AT&T emphasizes"
18, line 10	after "Louisiana" delete period and add "and calculated what the total switching investment would be at the contract price of
	\$64 per line.
18. 10-13	Delete sentence starting "We then mapped" and table (including footnote #30)
19, 3	After "matched", replace the rest of the sentence with "the total switching investments calculated from the contract."
19,4-5	Delete table
19,6-7	Delete sentence after table starting "The 5E Discounts" and footnote #31.
20,1	Replace Revised 5E Inv. column values with: \$25.34; \$25.34; \$25.34; \$51.56; \$1237.44
20,1	Replace Revised DMS Inv. column values with \$34.15; \$34.15; \$34.15; \$51.21; \$1229.04
20,10	Replace table values with:
	BS Analog per Line: \$25.34; \$34.15
	GR303 per Line: \$19.11; \$1.09
	Melded per Line: \$21.40; \$13.24
24, 2-3	Replace table values with:
	Line Inv./Line: \$21.40; \$13.24
	GS Additive: \$18.65; \$21.66
	Port Inv.: \$40.05; \$34.90; \$38.23
30, 7-9	Delete sentence starting with "Due to obtaining"
30,9-11	Delete sentence starting "BellSouth should have used" Do not delete footnote #52. Add "As before, SCIS/MO was run
ĺ	iteratively, varying the ISDN discount inputs until the results matched the contract prices." Move footenote #52 here.

## Corrections/Typos

Proprietary	Non- Proprietary	
Page, Line	Page, Line	Change
1, 20	1,20	Replace "including" with "excluding"
9, FN8	9, FN8	Delete "12/93-12/99 and"
10, FN10	10, FN10	Insert period after "account" Delete "that"
14,4	14,4	Delete "prices" and insert "current costs"
15, FN26	15-17, FN26	Delete sentence beginning "See Exhibit"
25, FN45	25, FN45	Second line replace "reflecting" with "reflect"
28, 3	28, 9	After price, delete "of"

	l	İ		!	l
				1	
Element	BellSouth Investment	Revised Investment		1	
					<del>                                     </del>
2-wire line port	62.74	38.226			
2-wire PBX port	62.74	38.226			
4-wire voice grade	62.74	38.226			
Coin	72.07	40.269			
2-wire DID	194.13	51.505			
4-wire DID	4659.06	1236.141			
2-wire ISDN (BRI)	478.28	131.189		<u> </u>	
4-wire ISDN (PRI)	5329.61	1199.371			
Switch MOU	0.005482	0.000732		<u> </u>	
Trunk MOU	0.0005581	0.000165			
Tandem Sw. MQU	0.001790	N/A		<u> </u>	
Tandem Trunk MOU	0.000895	0.000286			<u> </u>
Total Tandem MOU	0.002686	0.000286			
Ports include MDF and I	Protector, where approp	riate			
BS Port Inv. from Develo	opment of Investments V	Workpaper for each Po	ort Type: F	 RESBUS.xds	1
BS MOU Invs. from Sun					
Switching Investments.					
Network Calculator			T	T	

#### LOUISIANA PUBLIC SERVICE COMMISSION

STATE OF NEW JERSEY

COUNTY OF SOMERSET

BEFORE ME, the undersigned authority, duly commissioned and qualified in and for the State and County aforesaid, personally came and appeared before me,

Catherine E. Petzinger, who being first duly sworn, depose and said that:

She is appearing as a witness on behalf of AT&T Communications of the South Central States, Inc. before the Louisiana Public Service Commission in Docket No. U-22022/U-22093, and if present before the Commission and duly sworn, her testimony would be set forth in the annexed testimony consisting of 33 pages and 3 exhibits.

CATHERINE E. PETOINGER

SWORN TO AND SUBSCRIBED BEFORE ME THIS 2/ DAY OF AUGUST, 1997

Judith (1 Ross Communication Expires 12/4/01

### **CERTIFICATE OF SERVICE**

I hereby certify that a copy of the foregoing has been delivered by hand delivery,

Federal Express, or United States Postal Service to all parties listed on the service list on this the 25th day of August, 1997.

David L. Guerry